PROCEEDING

international seminar

STRATEGY TO MANAGE BIO-ECO-HEALTH SYSTEM FOR STABILIZING ANIMAL HEALTH & PRODUCTIVITY TO SUPPORT PUBLIC HEALTH

Surabaya-Indonesia, 19-20 June 2012
JW Marriott Hotel Surabaya

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FACULTY OF VETERINARY MEDICINE - UNIVERSITAS ARLANGGA
I-MHERE SUB-COMPONENT B.2.C PERFORMANCE BASED CONTRACT
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FACULTY OF VETERINARY MEDICINE - UNIVERSITAS Airlangga
I-MHERE SUB-COMPONENT B.2.C PERFORMANCE BASED CONTRACT
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ACKNOWLEDGEMENT
COMPARATIVE STUDY ON ENDOSCOPIC IMAGING: ESOPHAGOSCOPY AND GASTROSCOPY OF UPPER DIGESTIVE SYSTEM BETWEEN DOGS (CANIS LUPUS) AND CATS (FELIS CATUS)

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ABSTRACT

This study was to distinguish the upper digestive tract between dogs (Canis lupus) and cats (Felis catus) through endoscopic approach. Three adult male dogs and ten male adult cats were used in this study. All animals received anesthetic agent prior to endoscopic imaging procedure. Endoscopic were taken from left recumbence with mouth gag on the mouth. Scope of endoscope inserted through the mouth until stomach. During this procedure, stream video captured all imaging of procedure and save the video. The result showed that there are differences in appearance between dogs and cats. On esophagography, esophagus of cats in thorax region showed ring bone motif "tracheal like". However, esophagus of dog did not show that appearance until stomach. On gastroscopy. Other differences are stomach mucosa on the dog show more colored yellow in other hand, in the cats stomach mucosa appeared more orange colored with more flatten region than dogs.

Keywords: cat (Felis catus), dog (Canis lupus), endoscopy, esophagography, gastroscopy

INTRODUCTION

Most endoscopic instrumentation is produced for human medicine and surgery. The veterinary practitioner can use that instrument to address minimally invasive approach to provide an efficacious solution to the medical and surgical challenges (Tams & Rawlings 2011). Gastrointestinal (GI) endoscopy is one of the best and yet most fundamental methods of examining the GI tract. Esophagography also the most reliable for the diagnosis of disorders that disrupt the mucosa or obstruct the lumen, such as esophagitis, stricture, foreign body, and neoplasia. It is a well-established procedure in veterinary medicine internationally. However, in Indonesian veterinary practitioner, endoscopic instrumentation for diagnostic and surgery approach still unwidely used.

MATERIALS AND METHODS

Three adult male dogs and ten male adult cats were used in this study. All animal received anesthetic agent prior to endoscopic imaging procedure. Endoscopic were taken from left recumbence with mouth gag on the mouth. Scope (9 mm in diameter; 130 cm in length) of flexible endoscope (Gastric: PT Karindo Alkeskerok Indonesia) inserted through the mouth until stomach. During this procedure, stream video captured all imaging of procedure and save them.
RESULT AND DISCUSSION

Figure 1. Pharyngoscopic imaging. A. Feline, showed that epiglottic is open. B. Canine, epiglottic attached to pallium.

Figure 2. Esophagoscopic imaging, cervical region. A. Feline; B. Canine. Esophagus appearance not different.

Figure 3. Esophagoscopic imaging, thoracic region. A. Feline, showed ring bone motif "tracheal like" (herringbone) appearance; B. Canine, esophagus appearance same as cervical region.

Figure 4. Gastroscopic imaging. A. Feline, pilaric of stomach appearance. The cat's stomach mucosa appearance more orange colored with flatten rugae; B. Canine, pilaric of stomach showed that mucosa towel like appearance. Furthermore, stomach mucosa on the dog show rose colored typical with rugae.
Figure 5. Gastroscopic imaging. A: Feline, fundus of stomach appearance; B: Canine, fundus of stomach showed that mucosal bell-like appearance.

Flexible endoscope has become an essential diagnostic tool for the small animal veterinary (Mitchell & Tully 2008). The term endoscopy refers to examination of the lumen and mucosal lining of the esophagus with endoscopic equipment. In most cases, esophageal disease is diagnosed by the clinical history combined with contrast radiography of the esophagus, esophagoscopy, or both (Tams & Rawlings 2011). Radiography is the preferred method for documenting megaeosophagus, motility dysfunction, vascular ring anomalies, and hiatal hernia (Thrall 2002). Esophagoscopy not only is a valuable diagnostic procedure but also is useful as a therapeutic intervention (Tams & Rawlings 2011).

Gastrosopy mainly identifies abnormalities of the gastric mucosa, but it may also reveal distortion of the stomach's normal anatomic relationships by displacement or extrinsic compression as a result of a mass or enlargement of an adjacent organ (Tams & Rawlings 2011). Gastrosopy has become the most valuable diagnostic method available for evaluating primary gastric disorders of the gastric mucosa (Abdullah et al. 2011). This modality significantly increases the diagnostic yield in comparison with contrast radiographic studies, which are somewhat less sensitive in the evaluation of mucosal disorders. Endoscopic examination of the stomach has improved early diagnostic capability significantly and has highlighted the fact that gastric mucosal disorders occur fairly often (Tams & Rawlings 2011).

CONCLUSION

This study showed that feline and canine have differences appearance in gastrointestinal endoscopic imaging.

ACKNOWLEDGMENTS

Thanks to Pt. Karindo Aksteder which supported by lend us an endoscopic instrument (Gastra) during this study. We also thank to our student who help this study they were Andy Ranaya, Erlv Chandru, Kurniawan Prasetya and Hastin Utami Dumayantie.

REFERENCES


